What is Claimed is:

1. A substantially pure polypeptide, which comprises an amino acid sequence selected from

(a) the group consisting of Rv0288 (SEQ ID NO: 2) and its homologues Rv3019c (SEQ ID NO: 199) and Rv3017c (SEQ ID NO: 197);

(b) an immunogenic portion, e.g. a T-cell epitope, of any one of the sequences in (a); and /or

(c) an amino acid sequence analogue having at least 70% sequence identity to any one of the sequences in (a) or (b) and at the same time being immunogenic.

2. A substantial pure polypeptide according to claim 1, wherein the amino acid sequence analogue has at least 80% sequence identity to a sequence in (a) or (b).

3. A fusion polypeptide which comprises an amino acid sequence selected from

(a) the group consisting of Rv0288 (SEQ ID NO: 2) and its homologues Rv3019c (SEQ ID NO: 199) and Rv3017c (SEQ ID NO: 197);

(b) an immunogenic portion, e.g. a T-cell epitope, of any one of the sequences in (a); and /or

(c) an amino acid sequence analogue having at least 70% sequence identity to any one of the sequences in (a) or (b) and at the same time being immunogenic;

and at least one fusion partner.

4. A fusion polypeptide according to claim 3, wherein the fusion partner comprises a polypeptide fragment selected from

(a) a polypeptide fragment derived from a virulent mycobacterium, such as ESAT-6, MPB64, MPT64, TB10.4, CFP10, RD1-

ORF5, RD1-ORF2, Rv1036, Ag85A, Ag85B, Ag85C, 19kDa lipoprotein, MPT32, MPB59 and alpha-crystallin;

(b) a polypeptide according to claim 1 and/or

(c) at least one immunogenic portion, e.g. a T-cell epitope, of any of the polypeptides in (a) or (b).

5. A polypeptide which comprises an amino acid sequence selected from

(a) the group consisting of Rv0288 (SEQ ID NO: 2) and its homologues Rv3019c (SEQ ID NO: 199) and Rv3017c (SEQ ID NO: 197);

(b) an immunogenic portion, e.g. a T-cell epitope, of any one of the sequences in (a); and /or

(c) an amino acid sequence analogue having at least 70% sequence identity to any one of the sequences in (a) or (b) and at the same time being immunogenic;

which is lipidated so as to allow a self-adjuvating effect of the polypeptide.

6. A substantially pure polypeptide according to any of the claims 1-5 for use as a vaccine, as a pharmaceutical or as a diagnostic reagent.

7. Use of a polypeptide according to any of the preceding claims for the preparation of a pharmaceutical composition for diagnosis, e.g. for diagnosis of tuberculosis caused by virulent mycobacteria, e.g. by *Mycobacterium tuberculosis*, *Mycobacterium africanum* or *Mycobacterium bovis.*

8. Use of a polypeptide according to any of the preceding claims for the preparation of a pharmaceutical composition, e.g. for the vaccination against infections caused by virulent mycobacteria, e.g. by *Mycobacterium tuberculosis*, *Mycobacterium africanum* or *Mycobacterium bovis.*

9. An immunogenic composition comprising a polypeptide according to any of the preceding claims.

10. An immunogenic composition according to claim 9, which is in the form of a vaccine.

11. An immunogenic composition according to claim 9, which is in the form of a skin test reagent.

12. A nucleic acid fragment in isolated form which

(a) comprises a nucleic acid sequence which encodes a polypeptide as defined in any of claims 1-6, or comprises a nucleic acid sequence complementary thereto; or

(b) has a length of at least 10 nucleotides and hybridizes readily under stringent hybridization conditions with a nucleotide sequence selected from Rv0288 and its homologues Rv3019c or Rv3017c; nucleotide sequences or a sequence complementary thereto, or with a nucleotide sequence selected from a sequence in (a).

13. A nucleic acid fragment according to claim 12, which is a DNA fragment.

14. A nucleic acid fragment according to claim 12 or 13 for use as a pharmaceutical.

15. A vaccine comprising a nucleic acid fragment according to claim 12 or 13, optionally inserted in a vector, the vaccine effecting *in vivo* expression of antigen by an animal, including a human being, to whom the vaccine has been administered, the amount of expressed antigen being effective to confer substantially increased resistance to tuberculosis caused by virulent mycobacteria, e.g. by *Mycobacterium*

tuberculosis, *Mycobacterium africanum* or *Mycobacterium bovis*, in an animal, including a human being.

16. Use of a nucleic acid fragment according to claim 12 or 13 for the preparation of a composition for the diagnosis of tuberculosis caused by virulent mycobacteria, e. g. by *Mycobacterium tuberculosis*, *Mycobacterium africanum* or *Mycobacterium bovis.*

17. Use of a nucleic acid fragment according to claim 12 or 13 for the preparation of a pharmaceutical composition for the vaccination against tuberculosis caused by virulent mycobacteria, e.g. by *Mycobacterium tuberculosis*, *Mycobacterium africanum* or *Mycobacterium bovis*.

18. A vaccine for immunizing an animal, including a human being, against tuberculosis caused by virulent mycobacteria, e.g. by *Mycobacterium tuberculosis*, *Mycobacterium africanum* or *Mycobacterium bovis*, comprising as the effective component a non-pathogenic microorganism, wherein at least one copy of a DNA fragment comprising a DNA sequence encoding a polypeptide according to any of claims 1-6 has been incorporated into the microorganism (e.g. placed on a plasmid or in the genome) in a manner allowing the microorganism to express and optionally secrete the polypeptide.

19. A replicable expression vector which comprises a nucleic acid fragment according to claim 12 or 13.

20. A transformed cell harbouring at least one vector according to claim 19.

21. A method for producing a polypeptide according to any of claims 1-6, comprising

(a) inserting a nucleic acid fragment according to claim 12 or 13 into a vector which is able to replicate in a host cell, introducing

the resulting recombinant vector into the host cell, culturing the host cell in a culture medium under conditions sufficient to effect expression of the polypeptide, and recovering the polypeptide from the host cell or culture medium;

(b) isolating the polypeptide from a whole mycobacterium, e.g. *Mycobacterium tuberculosis*, *Mycobacterium africanum* or *Mycobacterium bovis*, from culture filtrate or from lysates or fractions thereof; or

(c) synthesizing the polypeptide e.g. by solid or liquid phase peptide synthesis.

22. A method of diagnosing tuberculosis caused by virulent mycobacteria, e.g. by *Mycobacterium tuberculosis*, *Mycobacterium africanum* or *Mycobacterium bovis,* in an animal, including a human being, comprising intradermally injecting, in the animal, a polypeptide according to any of claims 1-6 or an immunogenic composition according to claim 9, a positive skin response at the location of injection being indicative of the animal having tuberculosis, and a negative skin response at the location of injection being indicative of the animal not having tuberculosis.

23. A method for immunising an animal, including a human being, against tuberculosis caused by virulent mycobacteria, e.g. by *Mycobacterium tuberculosis, Mycobacterium africanum* or *Mycobacterium bovis*, comprising administering to the animal the polypeptide according to any of claims 1-6, the immunogenic composition according to claim 9, or the vaccine according to claim 18.

24. A monoclonal or polyclonal antibody which is specifically reacting with a polypeptide according to any of claims 1-6 in an immuno assay, or a specific binding fragment of said antibody.

25. A monoclonal or polyclonal antibody which is specifically reacting with a polypeptide according to any of claims 1-6 in an immuno assay,

or a specific binding fragment of said antibody, for use as a diagnostic reagent, e.g. for detection of mycobacterial antigens in sputum, urine or other body fluids of an infected animal, including a human being.

26. A pharmaceutical composition which comprises an immunologically responsive amount of at least one member selected from the group consisting of:

(a) a polypeptide selected from the group consisting of Rv0288 (SEQ ID NO: 2), Rv3019c (SEQ ID NO: 199), Rv3017c (SEQ ID NO: 197) and an immunogenic portion of any of these polypeptides;

(b) an amino acid sequence which has a sequence identity of at least 70% to any one of said polypeptides in (a) and is immunogenic;

(c) a fusion polypeptide comprising at least one polypeptide or amino acid sequence according to (a) or (b) and at least one fusion partner;

(d) a nucleic acid sequence which encodes a polypeptide or amino acid sequence according to (a), (b) or (c);

(e) a nucleic acid sequence which is complementary to a sequence according to (d);

(f) a nucleic acid sequence which has a length of at least 10 nucleotides and which hybridizes under stringent conditions with a nucleic acid sequence according to (d) or (e); and

(g) a non-pathogenic micro-organism which has incorporated (e.g. placed on a plasmid or in the genome) therein a nucleic acid sequence according to (d), (e) or (f) in a manner to permit expression of a polypeptide encoded thereby.

27. A method for stimulating an immunogenic response in an animal which comprises administering to said animal an immunologically stimulating amount of at least one member selected from the group consisting of:

(a) a polypeptide selected from the group consisting of Rv0288 (SEQ ID NO: 2), Rv3019c (SEQ ID NO: 199), Rv3017c (SEQ ID NO: 197) and an immunogenic portion of any of these polypeptides;

(b) an amino acid sequence which has a sequence identity of at least 70% to any one of said polypeptides in (a) and is immunogenic;

(c) a fusion polypeptide comprising at least one polypeptide or amino acid sequence according to (a) or (b) and at least one fusion partner;

(d) a nucleic acid sequence which encodes a polypeptide or amino acid sequence according to (a), (b) or (c);

(e) a nucleic acid sequence which is complementary to a sequence according to (d);

(f) a nucleic acid sequence which has a length of at least 10 nucleotides and which hybridizes under stringent conditions with a nucleic acid sequence according to (d) or (e); and

(g) a non-pathogenic micro-organism which has incorporated therein (e.g. placed on a plasmid or in the genome) a nucleic acid sequence according to (d), (e) or (f) in a manner to permit expression of a polypeptide encoded thereby.

28. Vaccine according to claim15 or 18, immunogenic composition according to claim 10 or pharmaceutical composition according to claim 26, characterized in that said vaccine/immunogenic composion/pharmaceutical composition can be used prophylactically in a subject not infected with a virulent mycobacterium; or therapeutically in a subject already infected with a virulent mycobacterium.

29. A method for diagnosing previous or ongoing infection with a virulent mycobacterium, said method comprising

(a) contacting a sample, e.g. a blood sample, with a composition comprising an antibody according to claim 24 or 25, a nucleic

acid fragment according to any of claims 12-14 and/or a polypeptide according to any of claims 1-6, or

(b) contacting a sample, e.g. a blood sample comprising mononuclear cells (e.g. T-lymphocytes), with a composition comprising one or more polypeptides according to any of claims 1-6 in order to detect a positive reaction, e.g. proliferation of the cells or release of cytokines such as IFN-γ.